UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

0000002

REPLY TO THE ATTENTION OF

SE-5J

MEMORANDUM

DATE: [illegible] 2002

SUBJECT: **ENFORCEMENT ACTION MEMORANDUM** - Determination of Need to Conduct a Time-Critical Removal Action at the St. Louis Auto Shredding Drum Disposal Site, Madison, St. Clair County, Illinois 62201 (Site ID:B5W8)

FROM: Michael D. Harris, On-Scene Coordinator
Emergency Response Branch - Section II

Kevin Turner, On-Scene Coordinator
Emergency Response Branch - Section II

TO: William E. Muno, Director
Superfund Division

THRU: Richard Karl, Chief R. Karl
Emergency Response Branch

I. PURPOSE

The purpose of this memorandum is to document the need to conduct a time-critical removal action to mitigate an imminent and substantial threat to the public health and the environment posed by the presence of hazardous substances located at the St. Louis Auto Shredding Drum Disposal Site, Madison, St. Clair County, Illinois 62201. The Site is the former main disposal area for the St. Louis Auto Shredding Site, which is currently listed on the Comprehensive Environmental Response, Compensation, and Liability Inventory System (CERCLIS) list. Soils containing hazardous wastes are present at the Site. This response action is necessary to mitigate the immediate threat to public health and the environment posed by these hazardous substances. The soil data shows elevated levels of arsenic, barium, chromium, total and Toxicity Characteristic Leaching Procedure (TCLP) lead, and polychlorinated biphenyls (PCB).

CERCLIS ID Number ILN000508136

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Site History

In 1993, a group of hunters walking along the railroad grade east of the site reported numerous overturned and lidless drums at the Drum Disposal Site. Later that year, a privately funded site inspection (SI) was conducted at the Drum Disposal Site. The SI report documented the presence of more than 25 drums at the Drum Disposal Site. Various drums were lidless, turned upside-down, or riddled with bullet holes. The drum contents were categorized as paint pigments, paint sludge, and epoxy material. Analytical results from the drum sampling activities revealed that the drum contents contained polychlorinated biphenyls (PCB), metals, volatile organic compounds (VOC), and semivolatile organic compounds (SVOC). In 1996, it is believed that these drums were removed from the Drum Disposal site by the St. Louis Auto Shredding Company.

In 1998, the Illinois State Geological Survey (ISGS) collected several soil samples from 1 to 9 feet below ground surface (bgs) at the Drum Disposal Site. Analytical results showed levels of various metals, including lead, that exceeded the Tiered Approach to Corrective Action Objectives (TACO) Tier 1 soil remediation levels (400 milligrams per kilogram [mg/kg] for lead) and Toxicity Characteristic Leaching Procedure (TCLP) levels (5 milligrams per liter [mg/L] for lead). PCBs were also detected at concentrations exceeding the Toxic Substances Control Act (TSCA) regulatory limit of 50 parts per million (ppm). Also in 1998, the Illinois Department of Transportation (IDOT) assigned Ecology & Environment, Inc. (E & E), to characterize site soil as part of an IDOT project to relocate a roadway. Analytical results from the E & E investigation confirmed previous soil analytical results that revealed PCB, metal, VOC, and SVOC contamination. As a result of E & E's assessment, the Drum Disposal site was referred to the Illinois Environmental Protection Agency's (IEPA) Site Assessment Unit (SAU).

2. Physical location

The Drum Disposal site is located in Madison, St. Clair County, Illinois. The geographical coordinates of the Drum Disposal site are latitude 38° 39' 20.18" North and longitude 90° 08' 25.99" West. The Drum Disposal site is the former main disposal area for the St. Louis Auto Shredding site, which is currently listed on the Comprehensive Environmental Response, Compensation, and Liability Inventory System (CERCLIS) list. The Drum Disposal site is located nearly 0.75 mile north of the St. Louis Auto Shredding site.

The Drum Disposal site is located in the northwest corner of the crossing of the former Illinois Terminal Electric Railroad grade running north to south and the Cahokia Canal running east to west (see Figure 2). The Gateway National Golf Links golf course surrounds the Drum Disposal site on the east, north, and west, and the Cahokia Canal borders the site to the south. The main disposal area is a clearing in a wooded area containing burn residue, patches of rubbery matter, and stressed vegetation. The clearing measures approximately 100 by 150 feet. START assessed an area encompassing approximately 150 by 200 feet, which extends into the wooded area. The Drum Disposal site slightly slants west-southwest toward a heavily wooded area. The wooded area extends to an area of wetland vegetation near the site. The wetland is located around the outer edge of the golf course and is not observed to flow into any other surface water body.

In Illinois, the low-income percentage is 27% and the minority percentage is 25%. To meet the Environmental Justice (EJ) concern criteria, the area within 1 mile of the Site must have a population that's twice the state low-income percentage and/or twice the state minority percentage. That is, the area must be at least 54% low income and/or 50% minority. At this Site, the low-income percentage is 91% and the minority percentage is 38% as determined by ArcView EJ analysis. Therefore, these demographic conditions indicate an EJ priority for the community around the site (see Attachment 3).

3. Removal site evaluation

At approximately 0900 on 14 Sep 01, START members Jennifer Mueller and Sara Giedeman; U.S. EPA OSC Turner; IEPA representative Mark Wagner; and PRI representative James Sheehan arrived at the parking lot of the Gateway National Golf Links golf course in Madison, Illinois. Golf carts were rented and driven along the railroad grade to the southeast corner of the Drum Disposal site. A cart path was created through the wooded area west of the railroad grade to the site clearing. At 0920, U.S. EPA and START conducted the site reconnaissance, which consisted of observing site conditions and determining locations for x-ray fluorescence (XRF) screening and soil sampling.

At 0930, PRI began XRF screening and START began soil sampling activities. The site assessment was completed at 1230 on 14 Sep 01.

A total of 35 locations in a rough grid pattern were screened with an XRF, and 4 soil samples were collected. START sampled soil at potentially sensitive areas specified by U.S. EPA OSC Turner based on locations showing high XRF contaminant

concentrations and marked the sampled areas with survey flags. START collected grab surface soil samples SS-1 through SS-4 in Level D personal protective equipment using dedicated sampling equipment. The collected samples were placed in sample jars and submitted for laboratory analysis based on the judgment of U.S. EPA OSC Turner and XRF field screening results.

START submitted all four surface soil samples collected to Pace Analytical Services in Lenexa, Kansas, for analysis under analytical TDD No. S05-0109-003. The samples submitted for analysis and the parameters analyzed for were chosen by U.S. EPA OSC Turner.

All samples were analyzed for total metals (Method 6010), mercury (Method 7471), Toxicity Characteristic Leaching Procedure (TCLP) metals (Method 6010), TCLP mercury (Method 7470), PCBs (Method 8082), and pH (Method 9045).

The pH levels of all samples were within the regulatory limit of 2.0 to 12.5. According to 40 CFR Section 261.22, Paragraph (a)(1), none of the samples are considered to have the hazardous waste characteristic of corrosivity.

For total metals analyses, sample concentrations were compared to residential soil preliminary remediation goals (PRG) set by U.S. EPA Region 9. Results for all samples except Sample No. SS-4 exceeded the regulatory limit of 0.39 mg/kg for arsenic. All sample concentrations exceeded the regulatory limits of 30 mg/kg for chromium and 400 mg/kg for lead. Samples No. SS-1 and SS-4 exceeded the regulatory limit of 5,400 mg/kg for barium. No sample results exceeded the regulatory limits for cadmium, selenium, silver, or mercury. For TCLP metals analyses, sample concentrations were compared to toxicity limits set forth in 40 CFR Section 261.24, Paragraph (b). For the TCLP metals analyses, all samples exceeded the regulatory limit of 5.0 mg/L for lead. No sample concentrations exceeded the TCLP regulatory limits for arsenic, barium, cadmium, chromium, selenium, silver, or mercury. For PCB analyses, sample concentrations were compared to residential soil preliminary remediation goals (PRG) set by U.S. EPA Region 9. All sample concentrations exceeded the regulatory limit of 220 µg/kg for the PCB congener Aroclor-1254. Results for all samples except Sample No. SS-3 exceeded the regulatory limit of 220 µg/kg for the PCB congener Aroclor-1260. No sample concentrations exceeded the regulatory limits for Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, or Aroclor-1248.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The Drum Disposal site is located in a commercial and recreational area of the Gateway National Golf Links golf course in Madison, St. Clair County, Illinois. The site is also located in a wooded area near wetland areas. Access to the site is uncontrolled. Analysis of surface soil samples collected during the site assessment indicate high

concentrations of several metals and PCBs. Contaminants present in surface soil at the Drum Disposal site could potentially migrate to off-site areas through surface runoff and wind dispersion.

B. State and Local Authorities Role

1. State and local actions to date

In Spring 2000, the IEPA SAU began a pre-CERCLIS screening action in conjunction with the U.S. EPA at the Drum Disposal site. Previous investigations showed that the contaminated soil at the site could potentially affect nearby wetland areas. The intent of the pre-CERCLIS screening action was to ascertain if potentially contaminated sites should be placed onto CERCLIS. Analytical results from the IEPA pre-CERCLIS screening action activities confirmed that soil at the site contains elevated concentrations of PCBs and metals. IEPA's activities also identified elevated levels of PCBs, zinc, and lead in sediment in the wetland areas near the Drum Disposal site. The IEPA pre-CERCLIS screening action report recommends that the Drum Disposal site be referred to the U.S. EPA for potential removal activities and placement on CERCLIS. The EPA has determined that a time-critical removal action is necessary to abate threats to human health and the environment.

III. THREATS TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the St. Louis Auto Shredding Drum Disposal Site constitute a threat to public health and welfare or the environment based upon the considerations set forth in the National Contingency Plan (NCP), 40 CFR Section 300.415 (b)(2) which include, but are not limited to the following:

- **Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants.** The Drum Disposal site is located near a commercial and recreational area of the Gateway National Golf Links golf course and within a wooded area and wetland areas. The site therefore poses the threat of potential exposure to animals and the food chain from PCB and metals contamination at high levels in site soil. Access to the Drum Disposal site is uncontrolled, which poses health concerns through the potential exposure of human populations to PCB and lead contamination at high levels in site soil.

  Harmful effects of lead include low birth weight, premature birth, decreased mental ability in infants, reduced growth in young children, and learning difficulties. Effects of exposure to lead are most severe in developing fetuses in pregnant woman and in young children. Effects of lead exposure in adults include decreased reaction time, inhibition of hemoglobin synthesis (causing

anemia), damaged male reproductive system, and increased blood pressure. U.S. EPA considers lead to be a class B2 or probable human carcinogen.

- **Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release.** Elevated levels of PCBs and metals are present in site surface soil according to XRF screening data results and soil sample analytical results. Concentrations of PCBs and metals at elevated levels in surface soil at the site indicate a threat of contaminant migration in melting snow or rain. Airborne contaminant migration is also possible through PCB adsorption to dust particles. Contaminants could also be tracked off site by people and animals that have contacted contaminated areas at the Drum Disposal site. Migration of contaminants from the Drum Disposal site has been determined a potential source of contamination to nearby wetland areas.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.** Elevated levels of PCBs and metals are present in surface soil at the site. Contaminants could migrate off site through heavy rains or winds that would transport PCBs and heavy metals adsorbed to dust particles. As a result of such weather conditions, PCBs and metals could be continuously released to surrounding soil and air. Migration of contaminants from the Drum Disposal site has been determined a potential source of contamination to nearby wetland areas.

4. The availability of other appropriate federal or state response mechanisms to respond to the release.

Illinois EPA requested U.S. EPA, Region 5, assistance with the St. Louis Auto Shredding Drum Disposal Site. The State of Illinois does not have the funds to undertake removal of the hazardous wastes found at this site.

IV. ENDANGERMENT DETERMINATION

The site is also located in a wooded area near wetland areas. Access to the site is uncontrolled. Analysis of surface soil samples collected during the site assessment indicate high concentrations of several metals and PCBs. Contaminants present in surface soil at the Drum Disposal site could potentially migrate to off-site areas through surface runoff and wind dispersion.

Because analytical results show high levels of lead and PCBs in soil at the site and because of the site's proximity to the golf course and wetland areas, the Drum Disposal site poses a direct threat to human health and the environment. Therefore, given the site conditions, the nature of the hazardous substances, and the potential exposure pathways described in Section III above, actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS

A. Proposed Actions

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances or contaminants at the site, and at surrounding residential areas, which may pose an imminent and substantial endangerment to public health and safety, or the environment.

The purpose of this removal action is to mitigate the imminent and substantial threats posed to public health or welfare or the environment from wastes at the site. The proposed immediate response action includes the following actions:

1) Prepare a work plan that includes tasks and time line for the activities as well as a site Health and Safety Plan addressing continuous monitoring of airborne contaminants and dust control measures.

2) Perform a soil characterization survey, with appropriate QA/QC, to determine the levels of specific metals in the surface soil.

3) Provide site security measures as required.

4) Characterize, remove and properly dispose of hazardous substance and wastes (contaminated soils) located at the Site in accordance with U.S. EPA's Off-Site Rule (40 CFR 300.440); Perform confirmation sampling of these areas.

5) Backfill the excavated areas with clean material and topsoil. Restore and vegetate to prevent soil erosion.

6) Properly address any additional hazardous waste and/or materials identified during the removal action.

7) Ensure that the proposed cleanup adequately protects human health, welfare, and the environment from the hazardous waste described in this Action Memo.

This removal action will be conducted pursuant to an AOC with the PRPs.
The OSC has initiated planning for provision of post-removal Site control consistent with the provisions of Section 300.41 5(l) of the NCP. The nature of this removal action, as well as the complete removal of all hazardous substance from the St. Louis Auto Shredding Drum Disposal Site, will eliminate the need for any post removal Site control.

B. Contribution to remedial performance

The proposed removal action will address all threats meeting the NCP Section 300.415(b)(2) removal criterial as identified in Section III of this Action Memorandum.

C. Applicable or relevant and appropriate requirements (ARARs)

A letter will be sent to Bruce Everett of the Illinois EPA, requesting the State to identify State ARARs. Compliance, to the extent practicable, with all ARARs of Federal and State environmental statutes and laws identified in a timely manner will be assured during this removal action.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Continued risk to public health and the environment will result if no action or delayed action ensues.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this site.

VIII. ENFORCEMENT

U.S. EPA will be working in coordination with the potentially responsible party (PRP) to eliminate the hazards posed by the site. For administrative purposes, information concerning the enforcement strategy for this site is contained in an Enforcement Confidential Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the St. Louis Auto Shredding Drum Disposal Site, Madison, St. Clair County, Illinois, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the information in the Administrative Record for the site. Conditions at the site meet the NCP Section 300.415(b)(2) criteria for a removal action. You may indicate your decision by signing below.

APPROVE: _____ DATE: 11/29/02
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Director, Superfund Division

Attachments:

1. Administrative Record Index
2. Enforcement Addendum
3. Region 5 Superfund EJ Analysis

cc: R. Worley, U.S. EPA HQ, 5202G
M. Chezik, U.S. Department of Interior, **w/o Enf. Addendum**
M. Webber, IL EPA, **w/o Enf. Addendum**
B. Everett, IL EPA, **w/o Enf. Addendum**

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(REDACTED 1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ATTACHMENT 1

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
ST. LOUIS AUTO SHREDDING DRUM DISPOSAL SITE
MADISON, ST. CLAIR COUNTY, ILLINOIS

ORIGINAL
NOVEMBER 4, 2002

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	12/24/01	Tetra Tech EM, Inc.	U.S. EPA	Site Assessment Report for the St. Louis Auto Shredding Drum Disposal Site	56
2	00/00/00	Harris, M. & K. Turner, U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Determination of Need to Conduct a Time-Critical Removal Action at the St. Louis Auto Shredding Drum Disposal Site **(PENDING)**	

ATTACHMENT 2

ENFORCEMENT ADDENDUM

ST. LOUIS AUTO SHREDDING DRUM DISPOSAL SITE
MADISON, ST. CLAIR COUNTY, ILLINOIS

ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY

(REDACTED 1 PAGE)

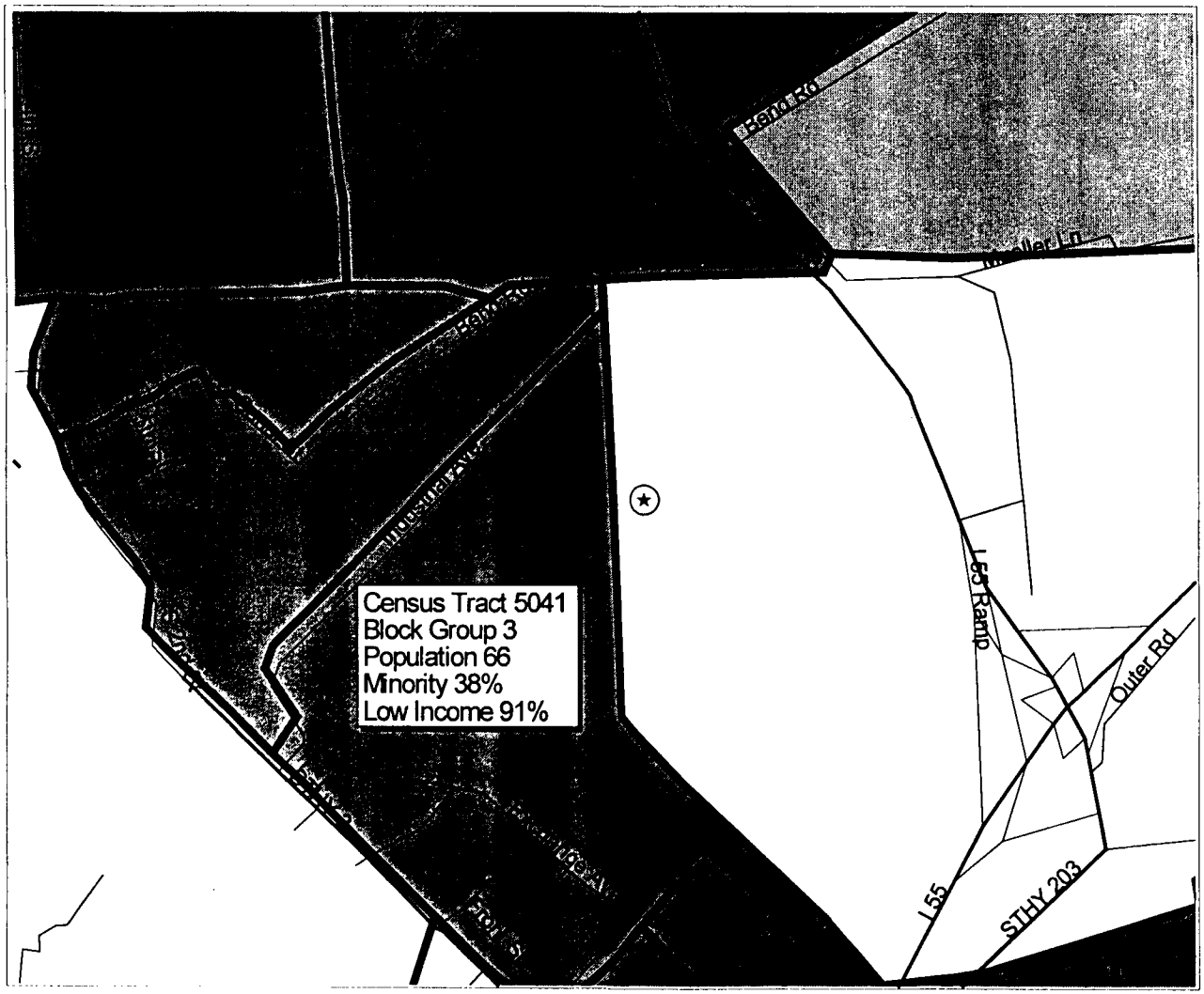
NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ATTACHMENT 3

Region 5 Superfund EJ Analysis

St. Louis Auto Shredding Drum Disposal Site

Madison, IL



EJ Identification

- Low Income and Minority Less than State Average
- Low Income or Minority at or Greater than State Average
- Low Income or Minority 2 Times or Greater than State Average [meets Region 5 EJ Case criteria]
- Site Location
- Block Group Boundary

Region 5 EJ Case Criteria for Illinois
Minority: 50% or greater
Low Income: 54% or greater

N

0 0.5 1 1.5 2 Miles

U.S. EPA Region 5 Superfund Program

Date of Map:9/13/02
Source of Map: 1990 Census Database